

#9

1646

TECH CENTER 1600/2900

JAN 10 2002

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DATE: 12/28/2001  
TIME: 16:10:51RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/424,458Input Set : A:\13198.asc  
Output Set: N:\CRF3\12282001\I424458.raw

P.S.

4 <110> APPLICANT: Hayward, Nicholas  
 5 Silins, Ginters  
 6 Grimmond, Sean  
 7 Gartside, Michael  
 8 Hancock, John  
 10 <120> TITLE OF INVENTION: A NOVEL GENE AND USES THEREFOR  
 12 <130> FILE REFERENCE: 13198  
 14 <140> CURRENT APPLICATION NUMBER: 09/424,458  
 15 <141> CURRENT FILING DATE: 2000-03-16  
 17 <150> PRIOR APPLICATION NUMBER: PCT/AU98/00380  
 18 <151> PRIOR FILING DATE: 1998-05-22  
 20 <160> NUMBER OF SEQ ID NOS: 111  
 22 <170> SOFTWARE: PatentIn Ver. 2.1  
 24 <210> SEQ ID NO: 1  
 25 <211> LENGTH: 8  
 26 <212> TYPE: PRT  
 27 <213> ORGANISM: Artificial Sequence  
 29 <220> FEATURE:  
 30 <223> OTHER INFORMATION: Description of Artificial Sequence:Peptide repeat motif in DnaJ homologues.  
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 34 <221> NAME/KEY: UNSURE  
 35 <222> LOCATION: (2)..(3)  
 36 <223> OTHER INFORMATION: Xaa at position 2,3 can be any amino acid.  
 38 <220> FEATURE:  
 39 <221> NAME/KEY: UNSURE  
 40 <222> LOCATION: (5)  
 41 <223> OTHER INFORMATION: Xaa at position 5 can be any amino acid.  
 43 <220> FEATURE:  
 44 <221> NAME/KEY: UNSURE  
 45 <222> LOCATION: (7)  
 46 <223> OTHER INFORMATION: Xaa at position 7 can be any amio acid.  
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 50 1 5  
 53 <210> SEQ ID NO: 2  
 54 <211> LENGTH: 1242  
 55 <212> TYPE: DNA  
 56 <213> ORGANISM: Homo sapiens  
 58 <220> FEATURE:  
 59 <221> NAME/KEY: CDS  
 60 <222> LOCATION: (30)..(959)  
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 65 Met Gly Leu Cys Lys Cys Pro Lys  
 66 1 5  
 68 aga aag gtg acc aac ctg ttc tgc ttc gaa cat cgg gtc aac gtc tgc 101

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Need to logout.

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71	10					15						20					
73	gag	cac	tgc	ctg	gta	gcc	aat	cac	gcc	aag	tgc	atc	gtc	cag	tcc	tac	149
75	Glu	His	Cys	Leu	Val	Ala	Asn	His	Ala	Lys	Cys	Ile	Val	Gln	Ser	Tyr	
76	25					30						35					40
78	ctg	caa	tgg	ctc	caa	gat	agc	gac	tac	aac	ccc	aat	tgc	cgc	ctg	tgc	197
80	Leu	Gln	Trp	Leu	Gln	Asp	Ser	Asp	Tyr	Asn	Pro	Asn	Cys	Arg	Leu	Cys	
81						45					50						55
83	aac	ata	ccc	ctg	gcc	agc	cga	gag	acg	acc	cgc	ctt	gtc	tgc	tat	gat	245
85	Asn	Ile	Pro	Leu	Ala	Ser	Arg	Glu	Thr	Thr	Arg	Leu	Val	Cys	Tyr	Asp	
86						60					65						70
88	ctc	ttt	cac	tgg	gcc	tgc	ctc	aat	gaa	cgt	gct	gcc	cag	cta	ccc	cga	293
90	Leu	Phe	His	Trp	Ala	Cys	Leu	Asn	Glu	Arg	Ala	Ala	Gln	Leu	Pro	Arg	
91						75					80						85
93	aac	acg	gca	cct	gcc	ggc	tat	cag	tgc	ccc	agc	tgc	aat	ggc	ccc	atc	341
95	Asn	Thr	Ala	Pro	Ala	Gly	Tyr	Gln	Cys	Pro	Ser	Cys	Asn	Gly	Pro	Ile	
96						90					95						100
98	ttc	ccc	cca	acc	aac	ctg	gct	ggc	ccc	gtg	gcc	tcc	gca	ctg	aga	gag	389
100	Phe	Pro	Pro	Thr	Asn	Leu	Ala	Gly	Pro	Val	Ala	Ser	Ala	Leu	Arg	Glu	
101	105					110					115						120
103	aag	ctg	gcc	aca	gtc	aac	tgg	gcc	cgg	gca	gga	ctg	ggc	ctc	cct	ctg	437
105	Lys	Leu	Ala	Thr	Val	Asn	Trp	Ala	Arg	Ala	Gly	Leu	Gly	Leu	Pro	Leu	
106						125					130						135
108	atc	gat	gag	gtg	gtg	agc	cca	gag	ccc	gag	ccc	ctc	aac	acg	tct	gac	485
110	Ile	Asp	Glu	Val	Val	Ser	Pro	Glu	Pro	Glu	Pro	Leu	Asn	Thr	Ser	Asp	
111						140					145						150
113	ttc	tct	gac	tgg	tct	agt	ttt	aat	gcc	agc	agt	acc	cct	gga	cca	gag	533
116	Phe	Ser	Asp	Trp	Ser	Ser	Phe	Asn	Ala	Ser	Ser	Thr	Pro	Gly	Pro	Glu	
117						155					160						165
119	gag	gta	gac	agc	gcc	tct	gct	gcc	cca	gcc	ttc	tac	agc	cga	gcc	ccc	581
121	Glu	Val	Asp	Ser	Ala	Ser	Ala	Ala	Pro	Ala	Phe	Tyr	Ser	Arg	Ala	Pro	
122						170					175						180
124	cgg	ccc	cca	gct	tcc	cca	ggc	cgg	ccc	gag	cag	cac	aca	gtg	atc	cac	629
126	Arg	Pro	Pro	Ala	Ser	Pro	Gly	Arg	Pro	Glu	Gln	His	Thr	Val	Ile	His	
127	185					190					195						200
129	atg	ggc	aat	cct	gag	ccc	ttg	act	cac	gcc	cct	agg	aag	gtg	tat	gat	677
131	Met	Gly	Asn	Pro	Glu	Pro	Leu	Thr	His	Ala	Pro	Arg	Lys	Val	Tyr	Asp	
132						205					210						215
134	acg	cgg	gat	gat	gac	cgg	aca	cca	ggc	ctc	cat	gga	gac	tgt	gac	gat	725
136	Thr	Arg	Asp	Asp	Asp	Arg	Thr	Pro	Gly	Leu	His	Gly	Asp	Cys	Asp	Asp	
137						220					225						230
139	gac	aag	tac	cga	cgt	cg	ccg	gcc	ttg	ggt	tgg	ctg	gcc	cg	ctg	cta	773
141	Asp	Lys	Tyr	Arg	Arg	Arg	Pro	Ala	Leu	Gly	Trp	Leu	Ala	Arg	Leu	Leu	
142						235					240						245
144	agg	agc	cgg	gct	ggg	tct	cg	aag	cgg	ccg	ctg	acc	ctg	ctc	cag	cgg	821
146	Arg	Ser	Arg	Ala	Gly	Ser	Arg	Lys	Arg	Pro	Leu	Thr	Leu	Leu	Gln	Arg	
147						250					255						260
149	gcg	ggg	ctg	ctg	cta	ctc	ttg	gga	ctg	ctg	ggc	ttc	ctg	gcc	ctc	ttt	869
151	Ala	Gly	Leu	Leu	Leu	Leu	Leu	Leu	Gly	Leu	Leu	Gly	Leu	Ala	Leu	Leu	

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152	265	270	275	280
154	gcc ctc atg tct cgc cta ggc cgg gcc gca gct gac agc gat ccc aac			917
156	Ala Leu Met Ser Arg Leu Gly Arg Ala Ala Asp Ser Asp Pro Asn			
157	285	290	295	
159	ctg gac cca ctc atg aac cct cac atc cgc gtg ggc ccc tcc			959
161	Leu Asp Pro Leu Met Asn Pro His Ile Arg Val Gly Pro Ser			
162	300	305	310	
164	ttagccccct tgcttgtggc taggcccagcc taggatgtgg gttctgtgg ggagaggcg 1019			
167	ggttaatgggg aggctgaggg cacctttca ctggccctct ccctcaagcc taagacacta 1079			
170	agaccccaaga cccaaagcca agtccaccag agtggctcg 1139			
173	gtgggtcaag catttgtctt gacttgctt ctcccggtc tccagcctcc gaccctcgc 1199			
176	cccatgaagg agctggcagg tggaaataaa caacaactt att			1242
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181	<211> LENGTH: 310			
182	<212> TYPE: PRT			
183	<213> ORGANISM: Homo sapiens			
185	<400> SEQUENCE: 3			
186	Met Gly Leu Cys Lys Cys Pro Lys Arg Lys Val Thr Asn Leu Phe Cys			
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189	Phe Glu His Arg Val Asn Val Cys Glu His Cys Leu Val Ala Asn His			
190	20	25	30	
192	Ala Lys Cys Ile Val Gln Ser Tyr Leu Gln Trp Leu Gln Asp Ser Asp			
193	35	40	45	
195	Tyr Asn Pro Asn Cys Arg Leu Cys Asn Ile Pro Leu Ala Ser Arg Glu			
196	50	55	60	
198	Thr Thr Arg Leu Val Cys Tyr Asp Leu Phe His Trp Ala Cys Leu Asn			
199	65	70	75	80
201	Glu Arg Ala Ala Gln Leu Pro Arg Asn Thr Ala Pro Ala Gly Tyr Gln			
202	85	90	95	
204	Cys Pro Ser Cys Asn Gly Pro Ile Phe Pro Pro Thr Asn Leu Ala Gly			
205	100	105	110	
207	Pro Val Ala Ser Ala Leu Arg Glu Lys Leu Ala Thr Val Asn Trp Ala			
208	115	120	125	
210	Arg Ala Gly Leu Gly Leu Pro Leu Ile Asp Glu Val Val Ser Pro Glu			
211	130	135	140	
213	Pro Glu Pro Leu Asn Thr Ser Asp Phe Ser Asp Trp Ser Ser Phe Asn			
214	145	150	155	160
216	Ala Ser Ser Thr Pro Gly Pro Glu Glu Val Asp Ser Ala Ser Ala Ala			
217	165	170	175	
219	Pro Ala Phe Tyr Ser Arg Ala Pro Arg Pro Pro Ala Ser Pro Gly Arg			
220	180	185	190	
222	Pro Glu Gln His Thr Val Ile His Met Gly Asn Pro Glu Pro Leu Thr			
223	195	200	205	
226	His Ala Pro Arg Lys Val Tyr Asp Thr Arg Asp Asp Asp Arg Thr Pro			
227	210	215	220	
230	Gly Leu His Gly Asp Cys Asp Asp Asp Lys Tyr Arg Arg Arg Pro Ala			
231	225	230	235	240
233	Leu Gly Trp Leu Ala Arg Leu Leu Arg Ser Arg Ala Gly Ser Arg Lys			
234	245	250	255	

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236	Arg	Pro	Leu	Thr	Leu	Leu	Gln	Arg	Ala	Gly	Leu	Leu	Leu	Leu	Leu	Gly	
237			260				265									270	
239	Leu	Leu	Gly	Phe	Leu	Ala	Leu	Leu	Ala	Leu	Met	Ser	Arg	Leu	Gly	Arg	
240			275				280									285	
242	Ala	Ala	Ala	Asp	Ser	Asp	Pro	Asn	Leu	Asp	Pro	Leu	Met	Asn	Pro	His	
243			290				295									300	
245	Ile	Arg	Val	Gly	Pro	Ser											
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254	<213>	ORGANISM:	Homo sapiens														
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257	<221>	NAME/KEY:	CDS														
258	<222>	LOCATION:	(3)...(2186)														
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263	Ile	Ser	Phe	Leu	Ala	Pro	His	Arg	Ser	Leu	Ser	Pro	Lys	Tyr	Ser		
264	1			5						10						15	
266	cat	ctt	gtc	cta	gcc	cat	ccc	cca	gac	tat	ctc	aag	gac	cag	ctg	tcc	95
268	His	Leu	Val	Leu	Ala	His	Pro	Pro	Asp	Tyr	Leu	Lys	Asp	Gln	Leu	Ser	
269				20						25						30	
271	cca	cgc	ccc	cga	cct	cca	cta	ggc	ctg	tgc	cac	ccg	ctg	cct	gca	gga	143
273	Pro	Arg	Pro	Arg	Pro	Pro	Leu	Gly	Leu	Cys	His	Pro	Leu	Pro	Ala	Gly	
274				35					40							45	
276	aga	cgc	ccg	gtc	ccg	ggc	cg	gtt	agc	ccc	atg	gga	acg	cag	cgc	ctg	191
278	Arg	Arg	Pro	Val	Pro	Gly	Arg	Val	Ser	Pro	Met	Gly	Thr	Gln	Arg	Leu	
279				50					55							60	
281	tgt	ggc	cgc	ggg	act	caa	ggc	tgg	cct	ggc	tca	agt	gaa	cag	cac	gtc	239
283	Cys	Gly	Arg	Gly	Thr	Gln	Gly	Trp	Pro	Gly	Ser	Ser	Glu	Gln	His	Val	
284				65				70								75	
286	cag	gag	gcg	acc	tgc	tcc	gcf	ggt	ttg	cat	tct	ggg	gtg	gac	gag	ctg	287
288	Gln	Glu	Ala	Thr	Ser	Ser	Ala	Gly	Leu	His	Ser	Gly	Val	Asp	Glu	Leu	
289				80				85				90				95	
291	ggg	gtt	cg	tcc	gag	ccc	gg	agg	ctc	ccg	gag	cgc	agc	ctg	ggc		335
293	Gly	Val	Arg	Ser	Glu	Pro	Gly	Gly	Arg	Leu	Pro	Glu	Arg	Ser	Leu	Gly	
294					100				105							110	
296	cca	gcc	cac	ccc	gcg	ccg	gcg	atg	gca	ggc	acc	ctg	gac	ctg	gac		383
298	Pro	Ala	His	Pro	Ala	Ala	Met	Ala	Gly	Thr	Leu	Asp	Leu	Asp			
299					115				120							125	
301	aag	ggc	tgc	acg	gtg	gag	gag	ctg	ctc	ccg	ggg	tgc	atc	gaa	gcc	ttc	431
303	Lys	Gly	Cys	Thr	Val	Glu	Glu	Leu	Leu	Arg	Gly	Cys	Ile	Glu	Ala	Phe	
304				130				135								140	
306	gat	gac	tcc	ggg	aag	gtg	cg	gac	ccg	cag	ctg	gtg	cgc	atg	ttc	ctc	479
308	Asp	Asp	Ser	Gly	Lys	Val	Arg	Asp	Pro	Gln	Leu	Val	Arg	Met	Phe	Leu	
309				145				150								155	
311	atg	atg	cac	ccc	tgg	tac	atc	ccc	tcc	tct	cag	ctg	gcf	gcc	aag	ctg	527
313	Met	Met	His	Pro	Trp	Tyr	Ile	Pro	Ser	Ser	Gln	Leu	Ala	Ala	Lys	Leu	
314				160				165				170				175	

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316	ctc cac atc tac caa caa tcc cgg aag gac aac tcc aat tcc ctg cag	575
318	Leu His Ile Tyr Gln Gln Ser Arg Lys Asp Asn Ser Asn Ser Leu Gln	
319	180 185 190	
321	gtg aaa acg tgc cac ctg gtc agg tac tgg atc tcc gcc ttc cca gcg	623
323	Val Lys Thr Cys His Leu Val Arg Tyr Trp Ile Ser Ala Phe Pro Ala	
324	195 200 205	
326	gag ttt gac ttg aac ccg gag ttg gct gag cag atc aag gag ctg aag	671
328	Glu Phe Asp Leu Asn Pro Glu Leu Ala Glu Gln Ile Lys Glu Leu Lys	
329	210 215 220	
331	gct ctg cta gac caa gaa ggg aac cga cgg cac agc agc cta atc gac	719
333	Ala Leu Leu Asp Gln Glu Gly Asn Arg Arg His Ser Ser Leu Ile Asp	
334	225 230 235	
336	ata gac agc gtc cct acc tac aag tgg aag cgg cag gtg act cag cgg	767
338	Ile Asp Ser Val Pro Thr Tyr Lys Trp Lys Arg Gln Val Thr Gln Arg	
339	240 245 250 255	
341	aac cct gtg gga cag aaa aag cgc aag atg tcc ctg ttg ttt gac cac	815
343	Asn Pro Val Gly Gln Lys Lys Arg Lys Met Ser Leu Leu Phe Asp His	
344	260 265 270	
346	ctg gag ccc atg gag ctg gcg gag cat ctc acc tac ttg gag tat cgc	863
348	Leu Glu Pro Met Glu Leu Ala Glu His Leu Thr Tyr Leu Glu Tyr Arg	
349	275 280 285	
351	tcc ttc tgc aag atc ctg ttt cag gac tat cac agt ttc gtg act cat	911
353	Ser Phe Cys Lys Ile Leu Phe Gln Asp Tyr His Ser Phe Val Thr His	
354	290 295 300	
356	ggc tgc act gtg gac aac ccc gtc ctg gag cgg ttc atc tcc ctc ttc	959
358	Gly Cys Thr Val Asp Asn Pro Val Leu Glu Arg Phe Ile Ser Leu Phe	
359	305 310 315	
361	aac agc gtc tca cag tgg gtg cag ctc atg atc ctc agc aaa ccc aca	1007
363	Asn Ser Val Ser Gln Trp Val Gln Leu Met Ile Leu Ser Lys Pro Thr	
364	320 325 330 335	
366	gcc ccg cag cgg gcc ctg gtc atc aca cac ttt gtc cac gtg gcg gag	1055
368	Ala Pro Gln Arg Ala Leu Val Ile Thr His Phe Val His Val Ala Glu	
369	340 345 350	
371	aag ctg cta cag ctg cag aac ttc aac acg ctg atg gca gtg gtc ggg	1103
373	Lys Leu Leu Gln Leu Gln Asn Phe Asn Thr Leu Met Ala Val Val Gly	
374	355 360 365	
376	ggc ctg agc cac agc tcc atc tcc cgc ctc aag gag acc cac agc cac	1151
378	Gly Leu Ser His Ser Ser Ile Ser Arg Leu Lys Glu Thr His Ser His	
379	370 375 380	
381	gtt agc cct gag acc atc aag ctc tgg gag ggt ctc acg gaa cta gtg	1199
383	Val Ser Pro Glu Thr Ile Lys Leu Trp Glu Gly Leu Thr Glu Leu Val	
384	385 390 395	
386	acg gcg aca ggc aac tat ggc aac tac cgg cgt cgg ctg gca gcc tgt	1247
388	Thr Ala Thr Gly Asn Tyr Gly Asn Tyr Arg Arg Arg Leu Ala Ala Cys	
389	400 405 410 415	
391	gtg ggc ttc cgc ttc ccg atc ctg ggt gtg cac ctc aag gac ctg gtg	1295
393	Val Gly Phe Arg Phe Pro Ile Leu Gly Val His Leu Lys Asp Leu Val	
394	420 425 430	
396	gcc ctg cag ctg gca ctg cct gac tgg ctg gac cca gcc cgg acc cgg	1343

Use of n and/or Xaa has been detected in the Sequence Listing.  
Review the Sequence Listing to insure a corresponding explanation is presented in the <220> to <223> fields of each sequence using n or Xaa.

VERIFICATION SUMMARY  
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L:49 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1  
L:1758 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:49  
L:1761 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:49  
L:1767 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:49  
L:1770 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:49  
L:1773 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:49  
L:2163 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:74  
L:2166 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:74  
L:2169 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:74  
L:2172 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:74  
L:2175 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:74  
L:2178 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:74  
L:2212 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:75  
L:2215 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:75  
L:2254 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:76  
L:2257 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:76